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10/824,435

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EXAMINER

PENG, FRED H

ART UNIT

PAPER NUMBER

2426

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/824,435 | <b>Applicant(s)</b><br>YOON ET AL. |  |
|                              | <b>Examiner</b><br>FRED PENG         | <b>Art Unit</b><br>2426            |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,8,9,11,14-16,18,19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,8,9,11,14-16,18,19,21 and 22 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/16/2010 has been entered.

**DETAILED ACTION**

***Status of Claims***

2. Claims 1, 4-6, 8-9, 11, 14-16, 18-19 and 21-23 are pending in this application.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 6, 8-9, 11, 14-15, 18-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lennon et al (US 2002/0107973) in view of Applicant's admit prior art (AAPA).

Regarding Claims 1 and 14, Lennon discloses an apparatus (FIG.2; comprising user terminal 101 and server side 212, 211, 210) with corresponding method operable to convert digital content metadata comprising:

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a mapping module (212) for converting the received external digital content metadata into the digital content metadata peculiar to the network (Para 8 - Para 11; Para 73 lines 1-14; Para 101; converting non-XML compliant into XML description metadata); and

a search module (212) for locating a Uniform Resource Locator (URL) using a unique identifier, wherein the unique identifier is assigned to each program in the received external digital content metadata (Para 73; Para 89-91; Para 101-110; Para 198; a content item description such as a name attribute or title for a selected program or a visual identifier representing the content in some way that is not XML compliant including Dublin Core, MPEG-7, DIG35 etc; a name attribute or title for a selected program or visual identifier of a URI representing the content is part of the descriptors contained in the metadata and are unique identifiers), said URL accessing a program in the received external digital content metadata, and wherein the search module locates the URL after the received external digital content metadata is converted by the mapping module (Para 73-74; Para 101-123; the media browser then is able to use the located URL, a link in the XML compliant metadata after conversion of the content identifier in the non-XML compliance descriptor to access the program).

Lennon is not explicit about locating the URL through a pre-assigned identifier such as standard CRID commonly used in the TV-Anytime forum and converting TV-Anytime metadata into metadata particular to the network such as UPnP CDS metadata.

In an analogous art, AAPA discloses locating URL through pre-assigned identifier such as standard CRID used in the TV-Anytime (refer to description of the Related Art of the invention, especially Para 20) which can be used in metadata in XML format without further conversion. AAPA further discloses a need of metadata conversion between two popular TV-Anytime and UPnP forums as both standards could co-exist in the same storage device PVR (FIG.1, 30; also refer to description of the related art of the specification).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include locating the URL through pre-assigned identifier such as standard

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CRID used in the TV-Anytime, as taught by AAPA to take advantage of the existing popular broadcast forums, thus access more available program resources.

Alternatively, as the prior art of Lennon teaches the known technique of converting metadata between different standards, a person of ordinary skill in the art would have recognized that applying the known technique of converting metadata between different standards would have yielded predictable results and would have improved the situations where two popular TV-Anytime and UPnP forums as both standards could co-exist in the same storage device PVR.

Regarding Claims 4 and 15, Lennon discloses a network apparatus (FIG.2, element 212) with corresponding method operable to convert digital content metadata comprising:

- a metadata receiving unit for receiving digital content metadata external to the network (Para 9);

- a converter for converting the received external digital content metadata into the digital content metadata peculiar to the network by causing the external digital content metadata received in the metadata receiving unit to be mapped into the peculiar digital content metadata in a predetermined manner (Para 8 – Para 14) and by locating a URL using a unique identifier assigned to each program in the received external digital content metadata content metadata, wherein said URL accesses a program in the received external digital content metadata, and wherein the URL is located after the received external digital content metadata is mapped into the peculiar digital content metadata (Para 1; Para 71; Para 72 line 8 before last – last line; Para 73 lines 1-14; the media browser then is able to use the located URL, a link in the XML compliant metadata to access the program after conversion of the content identifier in the non-XML compliance document); and

- a storage unit for storing the converted digital content metadata therein to allow devices in the network to use the converted digital content metadata (FIG.2, element 210; Para 73; the Legacy Database is converted digital content metadata for legacy metadata usage).

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Lennon is not explicit about locating the URL through a pre-assigned identifier such as standard CRID commonly used in the TV-Anytime forum and converting TV-Anytime metadata into metadata particular to the network such as UPnP type metadata.

In an analogous art, AAPA discloses locating URL through pre-assigned identifier such as standard CRID used in the TV-Anytime (refer to description of the Related Art of the invention, especially Para 20) which can be used in metadata in XML format without further conversion. AAPA further discloses a need of metadata conversion between two popular TV-Anytime and UPnP forums as both standards could co-exist in the same storage device PVR (FIG.1, 30; also refer to description of the related art of the specification).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include locating the URL through pre-assigned identifier such as standard CRID used in the TV-Anytime, as taught by AAPA to take advantage of the existing popular broadcast forum, thus access more available program resources.

Alternatively, as the prior art of Lennon teaches the known technique of converting metadata between different standards, a person of ordinary skill in the art would have recognized that applying the known technique of converting metadata between different standards would have yielded predictable results and would have improved the situations where two popular TV-Anytime and UPnP forums as both standards could co-exist in the same storage device PVR.

Regarding Claim 6, Lennon further discloses a processing module for analyzing and using metadata which has not been mapped into properties supported by classes of digital content metadata peculiar to an existing network among external digital content metadata mapped into the digital content metadata peculiar to the network (Para 12).

Regarding Claims 8-9 and 18-19, Lennon discloses the digital content metadata received external to the network can be some known metadata standards including well known MPEG for

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television program selection and converting into XML compliant description for searching using a unique identifier such as a visual identifier of a URI (Para 89; Para 101-106; Para 198).

Lennon is silent about specific TV-Anytime metadata and Universal Play and Plug (UPnP) and the pre-assigned unique identifier is a Content Reference Identifier (CRID).

In an analogous art, AAPA discloses that both TV-Anytime and UPnP metadata and related CRID are standards. AAPA further discloses TV-Anytime also includes popular MPEG format for television program while UPnP uses TCP/IP protocol and can be freely integrated into existing system (Description of related Art of application publication, Para 5-24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the conversion from TV-Anytime type of metadata (MPEG) to UPnP type of metadata (XML compliant) to take advantage of existing popular standards to accommodate more users.

Regarding Claim 11, the limitations have been analyzed and described as in Claims 4 and 6.

Regarding Claim 21, Lennon further discloses the mapping module converts the received external digital content metadata into the digital content metadata peculiar to the network by mapping the external digital content metadata into classes of the digital content metadata (Para 12-14).

Regarding Claim 22, Lennon further discloses the mapping module converts the received external digital content metadata into the digital content metadata peculiar to the network by defining a new class of the digital content metadata peculiar to the network, said new class corresponding to the received external digital content metadata (Para 104).

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4. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lennon et al (US 2002/0107973) and Applicant's admitted prior art (AAPA) as in claim 4, and further in view of Sie et al (US 2002/0199188).

Regarding Claims 5 and 16, Lennon fails to disclose a metadata filtering unit for deleting a part or all of the converted digital content metadata stored in the storage unit according to a predetermined condition.

In an analogous art, Sie discloses deletion of metadata when corresponding digital content is deleted (Para 132).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lennon's system to include deletion of metadata when corresponding digital content is deleted, as taught by Sie as a common practice to maintain updated digital content database.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1, 4-6, 8-9, 11, 14-16, 18-19 and 21-23 have been considered but are moot in view of the new ground(s) of rejection.

#### **In reference to Applicant's arguments**

In addition, it is clear that the prior art of record does not disclose or suggest that the digital content metadata received external to the network is TV-Anytime metadata, the digital content metadata peculiar to the network is Universal Plug and Play (UPnP) Content Directory service (CDS) metadata, and the unique identifier is a Content Reference Identifier (CRID). The Examiner fails to substantiate this rejection with respect to these features with actual teachings in the prior art. Instead, the Examiner alleges that it would be obvious to convert between the two standards since these standards are popular so as to accommodate more users (see page 4 of the Office Action). The Examiner's position amounts to a mere speculation disregarding the technical skill and expertise that is required for such conversions. Applicant respectfully submits



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that if it is obvious to convert between these two standards, it should not be difficult for the Examiner to substantiate this position with an actual reference. Since lack of references already demonstrates the weakness of the Examiner's position, it is clear that these claims are patentable for at least these exemplary reasons.

Examiner's response

The Examiner respectfully disagrees. Even though there is no actual reference to substantiate Examiner's position for obvious rejection to convert metadata between two popular standards TV-Anytime and UPnP, however, latest KSR ruling allows additional rationales to formulate 103 rejection. As one of rationales is to apply a known technique (such as a conversion between different metadata as taught by Lennon) to a known device (FIG.1, 30; such as a PVR containing both TV-Anytime 31 and UPnP 32 metadata standards, as disclosed in the Description of the Related Art of the invention, especially Para 12) ready for improvement (solving the problems for reading external metadata) to yield predictable results. Alternatively, a person of ordinary skill in the art would have had good reason to pursue the known options of converting from one external metadata standard to another metadata standard peculiar to the network. It would require no more than "ordinary skill and common sense" to do the conversion from TV-Anytime to UPnP if both standards co-exist in a same device and the device is only peculiar to an UPnP network.

In reference to Applicant's arguments

Also, one of ordinary skill in the art would not have combined the references. Since TV-Anytime described in the APA is in an XML format, combining the APA with Lennon would result in XML metadata. That is, there is no reason to combine the references as they would not produce format external to the network, as alleged by the Examiner.

Examiner's response

The arguments are considered but are moot since Examiner is not quite clear about the recitation of "That is, there is no reason to combine the references as they would not produce format external to the network, as alleged by the Examiner".

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***Allowable Subject Matter***

6. Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. Claims 1, 4-6, 8-9, 11, 14-16, 18-19 and 21-22 are rejected.

Claim 23 is objected.

***Correspondence Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRED PENG whose telephone number is (571)270-1147. The examiner can normally be reached on Monday-Friday 09:30-19:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hirl can be reached on (571) 272-3685. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fred Peng/

Examiner, Art Unit 2426

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/Joseph P. Hirl/

Supervisory Patent Examiner, Art Unit 2426

December 27, 2010